

**REMARKS**

The subject application is a national stage filing of International Application No. PCT/US2004/017754. With this amendment, the first paragraph of the specification has been amended to provide the application serial number of a priority application. Further, claims 1-88, 90-107, 135, 136, 140, 141, and 237-296 have been cancelled without prejudice and new claims 297-318 have been added. Thus, upon entry of the present amendment, claims 89, 108-134, 137-139, 142-236, and 297-318 will be pending.

In International Application No. PCT/US2004/017754 there are two claims numbered 155. Applicants respectfully request that the first instance of claim 155 in the International Application be renumbered claim 154 in the present application. Applicants have reflected this proposed claim numbering change in the listing of claims beginning on page 3.

Claim 212 has been amended to correct for antecedent basis. Section 2163.07 (II) of the Manual of Patent Examining Procedure, Eighth Edition, Revision 3, August 2005 (M.P.E.P.), states that “[a]n amendment to correct an obvious error does not constitute new matter where one skilled in the art would not only recognize the existence of an error in the specification, but also the appropriate correction.” Claim 212 depends from claim 211. The final phrase in claim 211 recites:

said first trait  $T_1$  is deemed to be causal for said second trait  $T_2$  when  
said first coefficient of determination is other than zero and said second  
coefficient of determination cannot be distinguished from zero.

In claim 212 as originally filed, the first trait  $T_1$  is incorrectly referred to as a “cellular constituent” and the second trait  $T_2$  is incorrectly referred to as a “trait of interest  $T$ .” It would have been obvious to one of skill in the art at the time the application was filed that the phrase “cellular constituent” in claim 212 should read “first trait  $T_1$ ” and that the phrase “trait of interest  $T$ ” should “read second trait  $T_2$ .” Thus, in claim 212 as amended, the phrase “cellular constituent” has been amended in favor of the phrase “first trait  $T_1$ ” and the phrase “trait of interest  $T$ ” has been amended in favor of the phrase “second trait  $T_2$ .” Claim 236 has been amended to correct for a typographical error.

Claims 297 and 298 have been added. Support for new claims 297 and 298 is generally found on page 54, line 7, through page 62, line 12, of the specification. More particularly, support for new claims 297 and 298 is found on page 57, lines 11-22, as well as

page 61, line 10, though page 62, line 6, of the specification. Support for new claims 297 and 298 is also found on page 23, lines 4-19, of the specification. Support for new claims 297 and 298 is further found in Figure 1 of the specification and, in particular, element 88 of Figure 1 as well as page 24, lines 26-28, page 55, lines 1-2, and page 253, lines 24-31, of the specification.

New claims 299-318 have been added to recite additional aspects of Applicants' invention. Support for these new claims is found in the following table.

Claim Number	Support in the Specification
299	Page 61, line 10, through page 62, line 6; page 7, line 29
300	Page 61, line 10, through page 62, line 6; page 7, lines 29-31
301	Page 61, line 10, through page 62, line 6; page 7, lines 31-33
302	Page 61, line 10, through page 62, line 6; page 7, lines 33-34
303	Page 61, line 10, through page 62, line 6; page 7, line 34, through page 8, line 1
304	Page 61, line 10, through page 62, line 6; page 8, lines 7-8
305	Page 61, line 10, through page 62, line 6; page 8, lines 9-10
306	Page 61, line 10, through page 62, line 6; page 8, lines 10-16
307	Page 61, line 10, through page 62, line 6; page 18, lines 30-33
308	Page 61, line 10, through page 62, line 6; page 7, line 29
309	Page 61, line 10, through page 62, line 6; page 7, lines 29-31
310	Page 61, line 10, through page 62, line 6; page 7, lines 31-33
311	Page 61, line 10, through page 62, line 6; page 7, lines 33-34
312	Page 61, line 10, through page 62, line 6; page 7, line 34, through page 8, line 1
313	Page 61, line 10, through page 62, line 6; page 8, lines 7-8
314	Page 61, line 10, through page 62, line 6; page 8, lines 9-10
315	Page 61, line 10, through page 62, line 6; page 8, lines 10-16
316	Page 61, line 10, through page 62, line 6; page 18, lines 30-33
317	Page 54, line 7, through page 62, line 12, in particular page 61, lines 10-16
318	Page 54, line 7, through page 62, line 12, in particular page 61, lines 10-16


Thus, no new matter has been added by way of the amendments to the specification, amendments to the claims, or by the addition of new claims 297-318.

### CONCLUSION

Applicants respectfully request entry of the foregoing amendments and remarks into the file of the above-identified application. If any fees are due in connection with this submission, please charge the required fee to Jones Day Deposit Account No. 50-3013.

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Respectfully submitted,

  
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